

SUPPORT FOR THE AMENDMENTS

Support for the amendment of Claims 1 and 10 is found on page 3, lines 1-5 and page 7, line 5, in the specification.

Claim 16 is amended to recite correct antecedent reference.

No new matter is believed added to this application by entry of this amendment.

Upon entry of this amendment, Claims 1-23 are active.

REMARKS/ARGUMENTS

The claimed invention is directed to a composition containing inorganic oxidic powders having a size as small as a nanometer range which is compatible with and useful for incorporating the powders into alkoxysilane formulations and products. A composition which is stable, readily dispersible, provides a homogeneous mixture and has a low viscosity is sought.

The claimed invention addresses this problem by providing the formulation according to Claim 1 and claims dependent thereon and the process for preparing the formulation according to Claim 10 and claims dependent thereon.

Applicants wish to thank Examiner Toscano for the useful and courteous discussion of the above-identified application with Applicants' U.S. representative on November 9, 2010. At that time Applicants' U.S. representative proposed and discussed amendment of Claims 1 and 10 to describe the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane as a solvent and to recite the weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder as from 19:1 to 3:2. This description was compared to the description of the references cited in the Office Action dated September 10, 2010, and Applicants U.S. representative argued that none of the cited references provided sufficient description to

support a conclusion of obviousness. The following reiterates and expands upon that discussion.

Applicants note that Claim 1 is herein amended to describe a formulation containing (i) at least one organoalkoxysilane and/or at least one organoalkoxysiloxane **solvent**; and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder of from **19:1 to 3:2**. Applicants have described the claimed formulation as follows (page 2, beginning at line 9):

Systems obtained in this way are generally clear, transparent to opalescent, readily pourable liquids having a comparatively low viscosity and a hitherto unknown, extremely high solids content.

Furthermore, formulations of the invention advantageously can be diluted as desired with an organic solvent or solvent mixtures, e.g., alcohols or esters.

In addition, systems of the invention are substantially storage-stable liquids having a storage stability of in general from 6 to 12 months at room temperature.

Present systems of the invention are referred to below, inter alia, as highly filled silane formulations or just silane formulation, or formulation.

Silane formulations of the invention can be used advantageously as what are termed liquid powders, especially where organosilanes and/or organosiloxanes can also be added.

Highly filled silane formulations of the invention can be used simply and advantageously, in particular, for application in downstream products, examples being liquid systems of other kinds, such as solutions, mixtures or melts; in this context, as compared with the incorporation of powders into a liquid system of another kind, the system of the invention can be incorporated with comparatively little effort, speedily, and with particular homogeneity.

No such formulation is disclosed or suggested by the cited references.

The rejection of Claims 1-14 and 16-23 under 35 U.S.C. 103(a) over Mehnert et al. (U.S. 6,830,816) is respectfully traversed.

Mehnert describes a composition containing a capsule of a metal oxide core and a silico-organic shell which is described as a nanohybrid and/or microhybrid **capsule**. The hybrid capsule is obtained by in-situ reaction in a synthetic resin between metal oxide particles and an organofunctional silicon compound having at least one hydrolysable

group(Abstract). Mehnert describes the composition as a paste (see for example, Col 5, lines 42 and 59) and describes that the content of water used is a well defined quantity being from 1 to 6 moles of water per mole of silicon in the silico-organic component (Col. 13, lines 55-58). Mehnert further describes the hybrid **capsule** as follows (Col. 9, lines 16-18):

In the silico-organic nanohybrid or microhybrid capsules, the weight ratio of core A to shell B is preferably 0.5:1 to 100:1, particularly preferably 1:1 to 2:1.

Nowhere does Mehnert describe a composition being a liquid dispersion having at least one organoalkoxysilane and/or at least one organoalkoxysiloxane as a **solvent** and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder as from 19:1 to 3:2 as according to the present invention. Mehnert describes only hybrid capsules wherein an organosilica shell is formed on an inorganic oxide core. Accordingly, Applicants submit that this cited reference does not make all the elements of the claimed invention known and cannot render the invention obvious. Applicants respectfully request that the rejection of Claims 1-14 and 16-23 under 35 U.S.C. 103(a) over Mehnert be withdrawn.

The rejection of Claims 1-23 under 35 U.S.C. 103(a) over Edelmann et al. (U.S. 6,699,586) is respectfully traversed.

Edelmann describes an organosilicon system containing nanoscale and/or microscale oxidic particles having an **organosilicon shell** which is formulated in a synthetic resin (Abstract). The system is prepared using from 1 to 6 moles of water per mole of silicon (Col. 9, lines 19-22). Nowhere does this reference disclose, suggest or provide motivation which would have led one of ordinary skill in the art to a composition based on from 0.001 to < 0.8 mole of water per mole of Si.

Edelmann describes the following (Col. 3, lines 11-25):

Furthermore, the present process produces oxide particles with a substantially **complete and multilayer organosilicon shell**, i.e., cores A which, directly and advantageously, are obtained in finely dispersed form in a curable synthetic resin or precursor of a curable synthetic resin. . . .

Compositions obtained in this way are distinguished by surprisingly advantageous processing properties on preparation and application, since practice shows that, despite the corundum fraction in the composition, the **organosilicon envelopment of the corundum particles** means that no additional wear is found on the mixing and application equipment. (Bold added for emphasis)

Nowhere does Edelmann describe a composition being a liquid dispersion having at least one organoalkoxysilane and/or at least one organoalkoxysiloxane as a **solvent** and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder as from 19:1 to 3:2 as according to the present invention. Therefore, this reference does not make all the claimed elements of the present invention known and a conclusion of obviousness cannot be supported. Accordingly Applicants respectfully request that the rejection of Claims 1-23 under 35 U.S.C. 103(a) over Edelmann be withdrawn.

The rejection of Claims 15 and 19 under 35 U.S.C. 103(a) over Mehnert in view of Hardman et al. (U.S. 4,329,273) is respectfully traversed.

Applicants note that the failure of Mehnert to disclose or suggest a composition being a liquid dispersion having at least one organoalkoxysilane and/or at least one organoalkoxysiloxane as a **solvent** and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder as from 19:1 to 3:2 as according to the present invention is described above. Claims 15 and 19 depend from Claim 10 and therefore include all the description of the independent claim.

Hardman describes an elastomeric silicone rubber composition containing a vinyl-terminated polysiloxane polymer, a hydride siloxane cross-linking agent, a platinum catalyst

and a partial hydrolysis product of an aliphatically unsaturated hydrolysable alkoxy silane (Abstract). Applicants submit that nowhere does Hardman disclose or suggest a composition being a liquid dispersion having at least one organoalkoxysilane and/or at least one organoalkoxysiloxane as a solvent and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder as from 19:1 to 3:2 as according to the present invention. Therefore, the cited secondary reference cannot cure the identified deficiency of Mehnert and the cited combination of references does not make all the elements of the invention known. Accordingly, a conclusion of obviousness over the cited reference combination cannot be supported and withdrawal of the rejection of Claims 15 and 19 under 35 U.S.C. 103(a) over Mehnert in view of Hardman is respectfully requested.

The rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Mehnert in view of Hardman is respectfully traversed.

Applicants have described that this combination of references does not disclose or suggest a formulation according to the invention containing (i) at least one organoalkoxysilane and/or at least one organoalkoxysiloxane **solvent**; wherein a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder is from 19:1 to 3:2. Accordingly, the cited combination cannot disclose or suggest all the claimed elements and cannot render the present invention obvious. Applicants respectfully request that the rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Mehnert in view of Hardman be withdrawn.

The rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Edelmann is respectfully traversed.

Applicants have described that this reference does not disclose or suggest a formulation according to the invention containing (i) at least one organoalkoxysilane and/or

at least one organoalkoxysiloxane solvent; wherein a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder is from 19:1 to 3:2. Accordingly, the cited reference does not disclose or suggest all the claimed elements and cannot render the present invention obvious. Applicants respectfully request that the rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Edelmann be withdrawn.

The provisional rejection of Claims 1-23 on the ground of nonstatutory obviousness-type double patenting over Claims 26, 33, 27, 53, and 34 of copending Application No. 11/258,025 is respectfully traversed. The copending application describes a process for preparing a polymerizable organosilicon nanocapsule (Claim 26) and does not disclose or suggest the formulation according to the invention containing (i) at least one organoalkoxysilane and/or at least one organoalkoxysiloxane solvent; wherein a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder is from 19:1 to 3:2. Accordingly, Applicants submit that the copending application cannot render the present invention obvious and respectfully request that the provisional rejection of Claims 1-23 on the ground of nonstatutory obviousness-type double patenting over Claims 26, 33, 27, 53, and 34 of copending Application No. 11/258,025 be withdrawn.

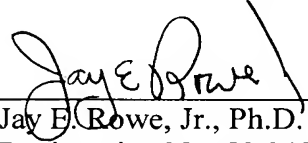
The objection to Claim 16 is believed obviated by appropriate amendment herein. Claim 16 is amended to recite "the formulation" as indicated by the Examiner. Applicants thank the Examiner for her assistance in this matter. In view of the amendment, Applicants respectfully request that the objection be withdrawn.

Application No. 10/563,022
Reply to Office Action of September 10, 2010

Applicants respectfully submit that the above-identified application is now in
condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Jay F. Rowe, Jr.", is written over a horizontal line.

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